Arguments/Remarks

Reconsideration of this application is requested based on the amendments set forth above and the following remarks:

In order to make clear the subject matter of the present invention, claims 1 and 2 have been amended as indicated above.

In regard to Claim 2, the phrase, "in a predetermined condition" adverbially modifies the phrase "respective fixed positions which are arranged". Hence, it is clear that the meaning of "respective fixed positions which are arranged in a predetermined condition" includes such meaning that respective arranged fixed positions are predetermined, and it is clear that respective fixed positions must be predetermined, in consideration of the subject matter of the present invention, as aforementioned. Therefore, in order to make clear the subject matter of the present invention, claim 2 has been amended as set forth above.

The subject matter of the present invention of Claim 1 or Claim 2 is disclosed in the following descriptions:

On page 5, paragraph 0018, " 'Associating' preferably involves for example relating to positions on a layer forming face (integrated face) constituting a layered structure produced by rolling the base member."

On page 12, paragraph 0054, "By analyzing these labeled fixed positions, the unknown chemical structure of the target substance can be determined."

On page 18, paragraph 0087, "FIG. 4 schematically shows one example of a measured identification pattern 55. Hence reference symbol 56 denotes positions on an image of the base member 15. Reference symbol 57 denotes reference points which are labeled beforehand so as to become reference for specifying fixed positions of the base member 15. Reference symbol 58 shows fixed positions where the labeled target substance has been combined. According to this example, the measurement results for each of the labeled fixed positions may be processed as planar information."

On page 20, paragraph 0095, "with the device for containing, reacting and measuring 60 according to this embodiment, there is provided a rotation section (not shown in the figure) serving as the scanning section, which can rotate a part containing the pipette section 64 through 360 degrees in relation to the central axis of the pipette

section 64. By rotation by this rotation section, the annular protrusion 80 slides inside the groove formed in the double annular wall sexton 78. As a result, complete light shielding is achieved, and all of the fixed positions provided on the integrated carrier 62 contained inside the large diameter section 72 can be scanned and the light received without any leakage."

As is clear from these descriptions, in order to determine chemical structure of a target substances which bonds to the substance for detection, namely chemical structure of the substance for detection, it is necessary to associate each of predetermined chemical structures with each of the predetermined fixed positions. Because, unless each fixed position is predetermined, chemical structure of the substance for detection associated with the fixed position is not determined by only specifying fixed position.

Comparison Between the Present Invention and Cited References

In regard to Claim 1 of the Present Application, the Examiner construed that the coating of Slovacek et al to be a base member, antigen (128) is a chemical substances for detecting the antibody, and that the waveguide (120) is used for a carrier coated by a base member. Further, the Examiner states that Slovacek, et al, teaches a uniform positioning of the chemical structures and that, thus, the positions would necessarily have to be predetermined to be uniform.

So long as the number of the sort of chemical structure positioned on the waveguide (120) is single, the chemical structure can be determined, by only specifying the fixed position. However, when various (two or more) sorts of substances for detection having predetermined chemical structures are fixed thereto, a chemical structure of a substance fixed to a fixed position can not be predicted by only specifying the fixed positions. Because, in Slovacek, et al, each of fixed positions of the substances is not predetermined, but is determined at random. In fact, Slovacek, et al, discloses that only presence/absence of the fluorescence is detected, but does not disclose that the position of the fluorescence is located and used for analysis.

In contrast thereto, with the present invention, each of various substances for detection having predetermined chemical structure relates to each of predetermined fixed positions in a predetermined condition. Consequently, by only specifying the fixed

positions, corresponding chemical structure can be determined. Thus, with the present invention, even if chemical structures of the target substances are unknown, by detecting the fixed positions where the target substances bonds, chemical structure of the target substance can be presumed or determined on the basis of the chemical structure of substances for detection corresponding to the fixed position.

Therefore, the present invention is distinct from the apparatus of Slovacek, et al, in that various sorts of substances for detection are fixed and are associated with their predetermined fixed positions in a predetermined condition. Owing to the distinction, with the present invention, fixed positions of substances for detection on a single base member can be easily and exactly detected by tracing the base member in longitudinal direction and specifying fixed positions of substances for detection, the chemical structure of the substances for detection can be easily and exactly specified, even if the substances or base member is densely arranged. Hence, various inspections or tests for investigating or studying chemical structure, characteristics, or presence of the substances for detection fixed on the base member, or binding partners or analyte that may be present in a test medium can be easily and exactly carried out.

With the apparatus of the Claim 2, the fixed positions relative to the base member are arranged in a predetermined condition, and substances for detection having predetermined chemical structure associate with each of the predetermined fixed positions. Hence, by detecting fluorescence on the base member and locating the fixed position, chemical structure of the target substances can be determined. Further, fluorescence of the target substances can be optically detected through a wall of the container.

In contrast thereto, with the apparatus of Glass, immobilized on the surface of a fiber is a component of a complex formed in an immunochemical-type reaction. A fluorophore that can be excited into fluorescence by the excitation radiation is attached to another component of the complex. The fiber is coaxially mounted in cantilevered position within a length of tubing, so that the excitation radiation can be launched into the unsupported end of the fiber and the fluorescent radiation tunneling back into the fiber may be observed at the same fiber end. Namely, fluorescent radiation in the

tubing propagates through the fiber 22 per se, and is received and measured by fluorimeter 43, so that information for the location of radiation is lost.

Hence, the apparatus of the present invention is distinct from that of Glass, in that the apparatus receives or measures or detects the radiation transmitted through the transparent wall of the container section in a manner that the location of radiation can be specified. Owing to this distinction in construction, with the present invention, by detecting radiation transmitted through the transparent wall of the container section, fixed positions of substances for detection on a single base member can be easily and exactly specified, and the chemical structure of the substances for detection can be specified.

Hence, various inspections or tests for investigating or studying chemical structure, characteristics, or presence of the substances for detection, or binding partners or analyte that may be present in a test medium can be easily and exactly carried out.

Claims 3-10 further limit claim 2 and therefore are also in condition for allowance. For example, with respect to claims 3 and 5, although the apparatus of Erb, et al, has a positioning means, the means is used for connecting an optical fiber to a receiver which is external to the enclosure, and is not used for scanning along the base member or relatively transferring a container which is external to the apparatus.

Conclusion

As mentioned above, the apparatus of the present invention are not only distinct from those of Slovacek, et al, Glass and Erb, et al, respectively, but also have the above-mentioned advantages. Hence, the rejections set forth in the Office Action should be withdrawn and claims 1-10 should be allowed.

Respectfully submitted,

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